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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/783,172	02/20/2004	Mark J. Mayer	GLOZ 2 00163	7296
27885	7590	12/20/2005	EXAMINER	
FAY, SHARPE, FAGAN, MINNICH & MCKEE, LLP 1100 SUPERIOR AVENUE, SEVENTH FLOOR CLEVELAND, OH 44114			DZIERZYNSKI, EVAN P	
			ART UNIT	PAPER NUMBER
			2875	

DATE MAILED: 12/20/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/783,172

Applicant(s)

MAYER ET AL.

Examiner

Evan Dzierzynski

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 18 November 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-7, 9-13, 15, 16, 21-24 and 27-30 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7, 9-13, 15, 16, 21-24 and 27-30 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Specification***

The disclosure is objected to because of the following informalities: The specification states, "Optionally, the lateral walls can act as a shield for LEDS that have a very wide light emission angle." However, neither the specification nor the drawings actually show or explain in detail how the lateral walls shield the LED. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-4, 6, 7, 9-12, 15-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zhang (US Pub 2002/0136025) in view of Grenga et al. (US Pat 5394317).

As for claims 1 and 4, Zhang teaches a lamp with a support structure (12, 31) wherein the support structure defines an opening 131 and includes a bridge 31 spanning the opening, wherein an LED 20 mounts to the bridge substantially facing a reflector 11. Zhang fails to teach the reflector including a facet that is individually aimed so that light reflected from the reflector forms a desired beam pattern while avoiding striking the support structure nor does it teach a lens cover. Grenga et al. indicates that the use of facets for reflecting light was well known (column 2 lines 5+). Grenga et al.

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further teaches the use of a lens cover 25 connected to a support structure 14. It would have been obvious for one of ordinary skill in the art to combine the use of facets as disclosed by Grenga et al. with the device of Zhang in order to individually place them so that the light shines out through the device, while avoiding the center support, in order to reduce heat and reflect light out through the system. It would also have been obvious for one of ordinary skill in the art to connect a lens cover to the support structure over the housing opening of Zhang because the lens would protect the apparatus from becoming damaged by weather or by other means while being held rigidly to the support structure as taught by Grenga et al.

As for claim 2, Zhang teaches a lamp with a support structure 31 comprised of a thermally conductive material (page 2, section 38).

As for claim 3, Zhang discloses a lamp wherein said support structure 31 mounts to the periphery of said reflector 11 (see fig 2).

As for claim 6, Zhang discloses a lamp where the bridge 31 substantially bisects said support structure 12.

As for claim 7, Zhang teaches a lamp that contains an LED 20 that is positioned aligned with a focal point of said reflector 11 (see fig 2).

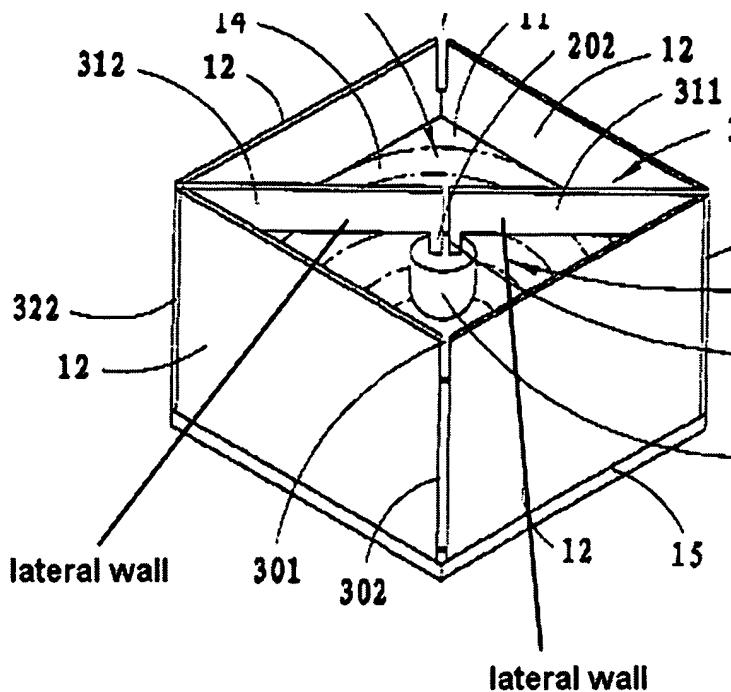
As for claim 9, Zhang teaches a lamp comprising a reflector 11. Zhang also teaches a support structure 12 which is above the reflector. Zhang further teaches a bridge 31 attached to the support structure, the bridge includes lateral walls depending toward the reflector (as indicated below). The lateral walls also include the reverse side of the indicated areas, which cannot be seen from the view in figure 1. Zhang also

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teaches an LED 20 mounted to the bridge between the lateral walls such that the lateral walls act as a shield for the LED. The lateral walls of Zhang (indicated below) provide shielding to the same extent of the instant application. As the claim reads, the LED is mounted to the bridge between the walls. Because of punctuation, the claim does not say that the LED is between the lateral walls.

Zhang fails to teach a lens cover for the lamp. Grenga et al. teaches the use of a lens cover 25 connected to a support structure 14. It would have been obvious for one of ordinary skill in the art to connect a lens cover to the support structure over the housing opening of Zhang because the lens would protect the apparatus from becoming damaged by weather or by other means while being held rigidly to the support structure. As for having the support structure between the reflector and the lens cover, combining with the lens of Grenga et al. makes the support structure between the reflector and the lens cover, since the lens cover can only effectively be placed above structures 12 and 31.

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As for claim 10, Zhang discloses a lamp wherein the reflector 11 is formed such that light directed by the reflector is directed towards the open end of the lamp 131 and to a side of the bridge (see fig 2).

As for claim 11, Zhang disclose a lamp which has a reflector that is formed such that portions of the reflector 11 which are not aligned with the bridge direct light toward the center of the lamp's beam pattern.

As for claim 12, Zhang discloses a lamp wherein the reflector 11 comprises a substantially dish-shaped portion and a periphery 14, wherein the bridge 31 is spaced from the dish-shaped portion.

As for claim 15, Zhang discloses a lamp wherein said support structure 30 attaches to the periphery of said reflector 11.

As for claim 16, Zhang teaches a lamp which contains an LED 20 that is positioned aligned with a focal point of said reflector 11.

Claims 5 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zhang in view of English et al. (US Pub 2003/0063476).

As for claim 5, Zhang does not explicitly teach an annular shape, however, in paragraph 31 Zhang states, "the cell body10 can be formed in any desired shape according to the use of the cell body 10." English et al. teaches a lamp wherein the support structure 14 is substantially annular. It would have been obvious for one of ordinary skill in the art to substitute the annular shape of English et al. with the device of Zhang because an annular shape provides a more uniform illumination pattern.

As for claim 13, Zhang teaches a support structure 14 that has a bridge 31 that spans the support structure. Zhang does not explicitly teach an annular shape, however, in paragraph 31 Zhang states, "the cell body10 can be formed in any desired shape according to the use of the cell body 10." English et al. teaches a lamp wherein the support structure 20 is substantially annular. It would have been obvious for one of ordinary skill in the art to substitute the annular shape of English et al. with the device of Zhang because an annular shape provides a more uniform illumination pattern.

Claims 21-22, 24, and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zhang (US Pub 2002/0136025) in view of Johnson (US Pat 6862091).

As for claim 21, Zhang teaches a lamp comprising a housing 10, a reflector 11 disposed in the housing, a bridge 31 disposed in the housing that substantially spans

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the reflector (Fig 1) and an LED 20 attached to the bridge and facing the reflector. Zhang fails to teach the reflector being shaped such that light striking the reflector directly behind the bridge is directed to either side of the bridge. Johnson discloses a reflector (Fig 21) that is shaped such that light striking the reflector is directed away from the center. It would have been obvious for one of ordinary skill in the art to combine the reflector of Johnson with the device of Zhang in order to reflect light out of the device by reflecting it to either side of the bridge.

As for claim 22, Zhang teaches a lamp further comprising a support structure 12 mounted to the housing and the reflector 11, wherein the bridge 31 attaches to the support structure 12.

As for claim 24, Zhang teaches a lamp containing a bridge 31 that at least substantially bisects the support structure 12.

As for claim 27, Zhang further teaches that the reflector is contoured such that light striking the reflector not directly aligned with the bridge is directed toward a center of a light beam pattern (Fig 2).

Claim 28 is rejected under 35 U.S.C. 103(a) as being unpatentable over Zhang in view of Drews (US Pat 3803401).

As for claim 28, Zhang teaches the device as discussed above, but fails to show a reflector that has an M-shaped contour in a cross-section. Drews discloses a reflector that has an M-shaped contour (Fig 7) in cross-section. It would have been obvious for one of ordinary skill in the art to combine the M-shaped contour of Drews with the



lighting device of Zhang in order to provide a reflector that improves dispersion of the light out of the system.

Claims 29-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zhang in view of McCullough et al. (US Pub 2004/0252502).

As for claim 29, Zhang teaches the device as discussed above, further comprising a circuit board 15, but fails to teach the LED being mounted on the circuit board and the circuit board attaches to the bridge. McCullough et al. teaches a similar device that has LEDs 46 mounted on a circuit board 45, and shows the circuit board attached to a bridge 31. It would have been obvious for one of ordinary skill in the art to combine the bridge configuration with the circuit board and LEDs of McCullough et al. with the device of Zhang in order to reduce heat by having a heat sink in the same area as the circuit board and the LEDs.

As for claim 30, Zhang teaches the device as discussed above, but fails show that the circuit board comprises a thermally conductive material. McCullough et al. discloses a circuit board that is comprised of a thermally conductive material (paragraph 0021). It would have been obvious for one of ordinary skill in the art to combine the thermally conductive circuit board of McCullough et al. with the device of Zhang in order to more effectively transfer heat away from the LED and the circuit board.

### ***Response to Arguments***

Applicant's arguments with respect to claim 1 have been considered but are moot in view of the new ground(s) of rejection.

As for the arguments with respect to claim 8, the Applicant appropriately argues that Grenga fails to *disclose* a reflector with facets in the Grenga's actual device, however, Grenga et al. does mention the prior usage of facets for reflecting in this art, (column 2, lines 5+) for that reason, Grenga et al. is still considered a relevant reference.

As for the arguments with respect to claim 14 dealing with the lateral walls not acting for a shield for the LED, this has been addressed in page 5 of the instant office action. The lateral walls indicated on page 6 do, in fact, shield the LED. The Applicant's argument that one skilled in the art would not modify Zhang such that the LED is mounted between the lateral walls as been considered, but is not persuasive since it is not necessary for the support arms to have an increased thickness to provide shielding for the LED, Zhang's device does in fact provide shielding for the LED.

The arguments with respect to claim 21 are moot because claim 21 has been addressed under new grounds of rejection.

Claims 27-30 are addressed in the above Office action.

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Jacobson et al. (US Pub 2005/0168994) discloses an annular shaped lighting device with a bridge that spans the housing, with an LED on the bottom side, shielded by walls that span from the bridge.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

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§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

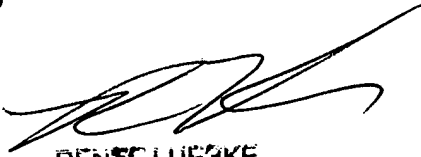
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Evan Dzierzynski whose telephone number is (571)-272-2336. The examiner can normally be reached from 7-3:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Renee Luebke can be reached at (571)-272-2009. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Evan Dzierzynski

12/13/2005



RENEE LUESKE  
PRIMARY EXAMINER